

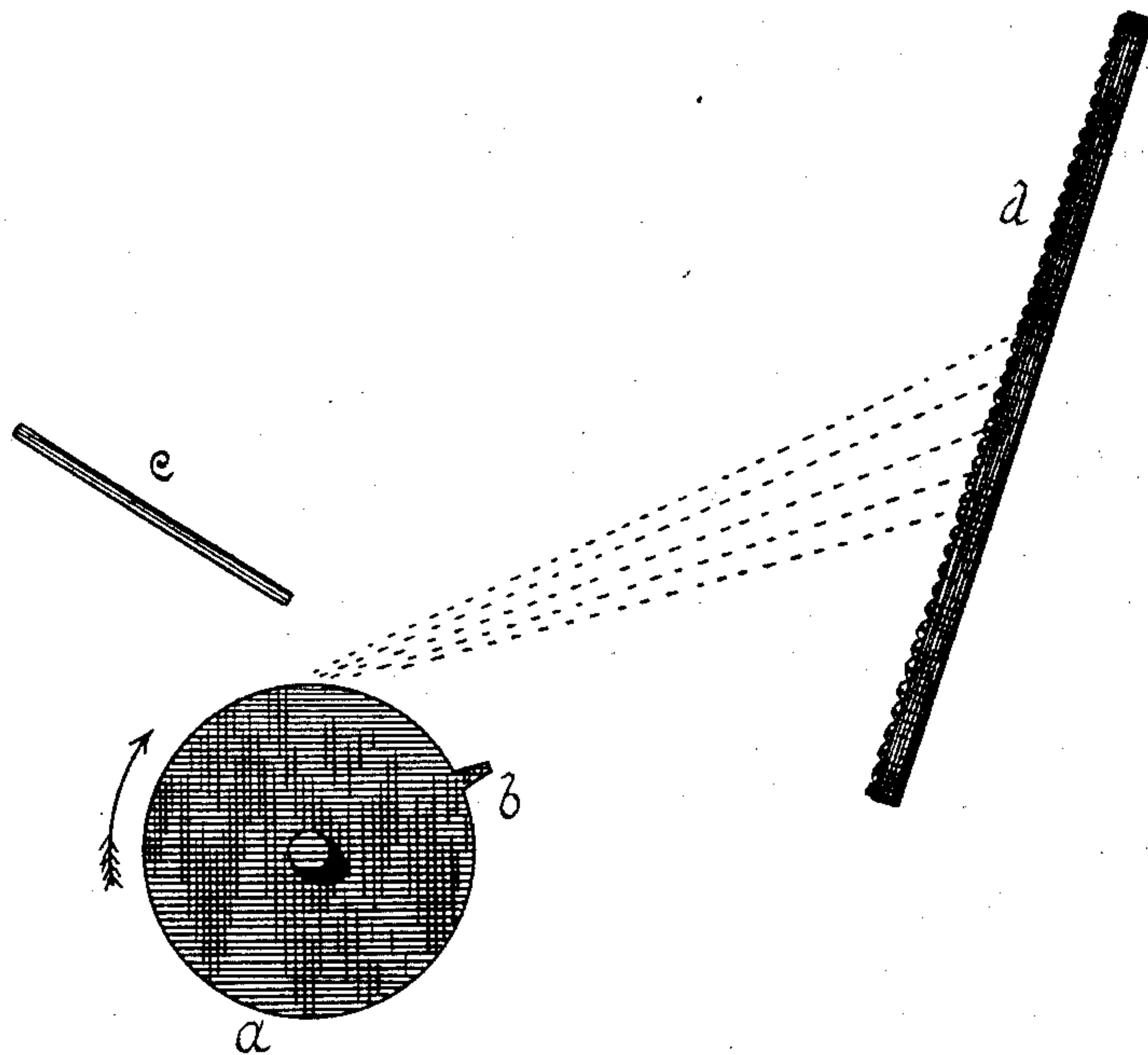
(No Model.)

S. FRIEND.

SAND AND GRAVEL SEPARATOR.

No. 348,666.

Patented Sept. 7, 1886.



ATTEST.

C. C. Clark

J. N. Bills

INVENTOR

SAMUEL FRIEND

By *L. P. Graham*
att'y.

UNITED STATES PATENT OFFICE.

SAMUEL FRIEND, OF DECATUR, ILLINOIS.

SAND AND GRAVEL SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 348,666, dated September 7, 1886.

Application filed April 26, 1886. Serial No. 200,234. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL FRIEND, of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful
5 Improvements in Sand and Gravel Separators, of which the following is a specification.

The object of my invention is to utilize the centrifugal force of a rapidly-revolving cylinder to project sand and gravel against a separating-screen, the said invention consisting in
10 certain details of construction and arrangement, as hereinafter set forth and claimed.

In the drawing accompanying and forming a part of this specification, *a* is a cylinder having a rapid rotation on a horizontal axis in the
15 direction of the contiguous arrow.

b is a longitudinal peripheral rib on cylinder *a*.

c is a guide-chute that discharges the sand and gravel at about the vertical center of the
20 upper surface of the cylinder.

d is a screen, placed in opposition to the direction of the rotation of cylinder *a*, separate from said cylinder but within easy reach
25 of its discharge, the lower end of said screen being on an approximate horizontal line with cylinder *a*. The cylinder *a* may be connected with the power-imparting mechanism in any suitable manner. Any suitable form
30 of casing may be provided, and adjuncts for assisting in the distribution of the separated sand and gravel may be combined with my device when necessary. The sand and gravel
35 will be projected from the cylinder in the general direction indicated by the dotted lines,

allowance being made for gravity; but the speed of the rotation of the cylinder and the position of the guide-chute will have a modifying influence on the direction of said projection.

The operation of my machine is very simple, the sand and gravel being gradually fed to the upper surface of the cylinder, and by the centrifugal force of said cylinder projected against the separating-screen.

As distinguishing my machine from ordinary hand-screens and from machines in which the sand is agitated in a concave sieve by actual contact of a toothed cylinder, I will state that it is indispensable that the sand and
45 gravel be fed to the upper surface the cylinder, that the cylinder be rapidly rotated, and that the screen be separate from the cylinder and in a position to receive its discharge.

I claim as new and desire to secure by Letters Patent—

A separator for sand and gravel, consisting in a longitudinally-ribbed cylinder adapted to rotate rapidly on a horizontal axis, means for conveying the sand and gravel to the upper
50 surface of the cylinder, and a separating-screen having its face opposed to the centrifugal discharge of the cylinder, as and for the purpose set forth.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

SAMUEL FRIEND.

Attest:

C. C. CLARK,
L. P. GRAHAM.